

(c) A rather distinct-looking species allied to *A. hepatica*, McLachl., and resembling it in colour, though with the neuration of the wings quite obscure. It has three series of gradate nervules on the anterior wings. I do not venture to name it, having only a female specimen, which I captured on Haleakala, Maui.

Myrmeleontidæ.

It seems a singular thing that I have met with the one species of this family known as Hawaiian only in a single ravine on Maui, though there it is common enough, and so conspicuous as to seem incapable of escaping notice. It is fairly strong on the wing.

In conclusion I will just say that the non-existence or (more probably) rarity of the Trichoptera is in accord with the state of affairs in other orders. All water-frequenting insects are scarce, the described Dytiscidæ being represented by three (one of which is unique), the Hydrophilidæ by one, and the true water-bugs by two species respectively. There scarcely can be said to be any constant fresh water on the islands. I am not aware of any permanent natural freshwater lake; at any rate, the only one I know that is probably permanent is at an elevation of near 15,000 feet above the sea. (When I visited it, it was frozen over.) There are springs here and there, one of which was a favourite hunting-ground with me, as its moisture attracted insects to the neighbourhood; but I feel sure that no Trichoptera occur there. There are also *streams* which do not absolutely disappear in dry seasons; but the natural state of the islands, apart from modern arrangements for the artificial preservation of water, is that of possessing very little permanent water really fresh. On one of the islands (Lanai) it is said that the horses and other animals do not know how to drink. The comparative abundance of Agrionidæ is remarkable, and I know not how to account for it.

Port Lincoln, South Australia, Oct. 1884.

LIII.—*Contribution to our Knowledge of Hydromedusa, a Genus of South-American Freshwater Turtles.* By Dr. A. GÜNTHER, F.R.S.

[Plate XIV.]

HAVING recently received a very well-preserved and interesting specimen of *Hydromedusa* from fresh waters south of
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the Rio de la Plata, I have been induced to examine the history of this genus, the species having lapsed into a singular state of confusion from the time in which the genus was established by Wagler (Syst. Amphib. 1830, p. 135), who confounded the species seen and figured by him with that which had been so well described and figured in Mikan's Delect. Flor. et Faun. Bras. In this he was followed by Duméril and Bibron, Gray, and other subsequent writers.

HYDROMEDUSA.

Shell much depressed, with six scutes in the vertebral series and twenty-four marginals. Sternum solid, the two middle scutes directly forming a suture with the marginals, without axillary or inguinal scutes. Median gular very large, deeply penetrating between the postgulars. Neck long; head depressed, covered with skin, which, however, is divided into numerous small scutes. Mouth of moderate width; jaws narrow, with a horny sheath. Eye of moderate size. Limbs covered with granular skin, with a few transverse scutes. Four claws only, in front and behind. Tail very short.

System of the Plate River and the country intervening between it and the Atlantic coast.

The species known to me at present can be readily distinguished thus :—

1. *Hydromedusa Maximiliani* (Mikan).

Emys Maximiliani, Mikan, l. c. c. tab.

Chelodina flavilabris, Dum. & Bibr. p. 446.

Chelomedusa flavilabris, Gray, Ann. & Mag. Nat. Hist. 1873, xi. p. 304.

Hydromedusa Bankæ, Giebel, Zeitschr. Ges. Naturw. 1860, xxvii. tab. iv.

Shell very flat; dorsal scutes without tubercles at any age. Nuchal comparatively small; first vertebral large, with a concave anterior margin, and intervening between the nuchal and first costal.

A small species which is fully adult with a shell six inches in length, from the province of San Paulo (Brazil). Giebel's statement that the type of *H. Bankæ* came from the island of Banka must rest upon some mistake. I have examined four specimens, which show that the character taken from the shape of the first vertebral scute is constant; they fully agree with Mikan's very good and Giebel's rude figure.

2. *Hydromedusa depressa* (Gray).*Hydromedusa depressa*, Gray, Cat. Shield Rept. p. 60, tab. xxvi.*Hydromedusa subdepressa*, Gray, Proc. Zool. Soc. 1852, p. 134.

Shell very flat; dorsal scutes without any tubercles. Nuchal large and slightly in contact with the first costal.

Brazil. The specimen which is the type of *H. depressa* as well as of *H. subdepressa* is still the only individual known of this species.

3. *Hydromedusa Wagleri*, sp. n.*Hydromedusa Maximiliani* (nec Mikan), Wagl. Syst. Amphib. p. 135, tab. iii. figs. 25-42; Gray, Cat. Shield Rept. p. 59.*Chelodina Maximiliani*, Dum. & Bibr. p. 449 (part.).

Tuberosities are persistent throughout life on the last two vertebral and costal scutes. Nuchal very large and broad and in contact with the first costal, the first vertebral having an oblong form (but being only three fourths as wide as long).

An adult male with a shell 7 inches long, in the Natural-History Museum, from Buenos Ayres, agrees well with Wagler's figure and with the description of one of the two specimens given by Duméril and Bibron, who also assign Buenos Ayres as the native country of this species.

It is very probable that *Hydromedusa tectifera*, Cope (Proc. Am. Phil. Soc. 1869, p. 147), from the Parana or Uruguay, is identical with this or the following species, in which case the name given by Cope would have priority. Although Cope describes the forms of the nuchal and first vertebral (the latter being nearly twice as long as wide), he omits to say whether or not the nuchal is in contact with the first costal.

4. *Hydromedusa platanensis* (Gray).

Pl. XIV.

Chelodina Maximiliani (nec Mikan), Dum. & Bibr. p. 449 (part.).*Hydromedusa platanensis*, Gray, Ann. & Mag. Nat. Hist. 1873, xi. p. 302.

Nuchal scute transversely broad (in the adult about thrice as wide as long), but separated from the first costal by the produced anterior corners of the first vertebral. Vertebral and costal scutes with tuberosities which disappear with age, with the exception of those of the last two vertebrals and costals.

This is a large species, which was first noticed in this Journal (*l.c.*), the shell of a fully adult specimen being $9\frac{1}{2}$ inches long. It inhabits the Rio de la Plata and fresh waters further to the south. The young differs so remarkably from the adult that I append a detailed description; it is figured on Pl. XIV.

This singular turtle reminds us at the first glance of the

Matamata, and in other respects of the *Platemys tuberosa* from British Guiana, which, however, is sufficiently distinct to be placed in the genus *Platemys*, as proposed by Peters. The shell is depressed, with a short oval outline, the hind margin being very obtuse. Each vertebral scute is raised in the middle into a tubercular prominence, and each costal is likewise provided with a similar prominence on its areola. The tuberosities of the marginal scutes are in the form of oblique ridges which terminate in a prominence at the posterior corner of each scute. Tubercular ridges radiate also from the areolar part of each vertebral and costal scute, so that the whole surface of the shell presents an extremely uneven appearance, resembling that of a rough stone.

Although there are six scutes along the vertebral line, the first of which is very little smaller than the second, and does not enter the margin of the shell, this genus does not differ in this respect from other turtles. That first scute is evidently only a very large nuchal shield which has been excluded from the margin by the enlarged foremost pair of marginals. If this were not the case, the number of costals would be increased too, and we should then have five of them instead of four.

The sternum is flat, much longer than broad, truncated in front and deeply notched behind, the margin forming an angular edge along the bridge connecting the sternum with the upper shell. The bridge is rather narrow, formed only by part of the abdominal and pectoral scutes, which are suturally connected with the fifth, sixth, and seventh marginals, inguinal and axillary scutes being absent. The median gular is large and very long, separating not only the gulars proper, but also nearly the postgulars. Abdominal rather narrower than the pectoral and the postabdominal; caudals large, two thirds the size of the postabdominals.

Neck long, bending towards the right and covered with granular skin, some of the granules on the sides being pointed; head flat, long, with short snout and short pointed nose, covered with soft skin, in which, however, the division into a great number of small scutes is distinctly indicated. Tympanum not visible; eyes of moderate size, with round pupil, close together, and partly directed forward. The snout is scarcely longer than the eye; nostrils small, round, directed forward. Jaws weak and narrow, covered with a horny sheath, the cleft of the mouth extending as far back as the eye. A broad fold at the angle of the mouth permits the gape to be opened wide in a vertical direction, and the numerous

external folds of the skin along the lower side of the throat show also clearly that the œsophagus is very distensible, and that this turtle feeds on larger animals (fish or frogs) than one might suppose from the slenderness of the neck.

The legs are covered with soft scutes, of which the majority are very small, only a few being enlarged and transverse along the inner and outer edges of the fore and hind limbs. Toes broadly webbed, and the forearm provided with a fringe of skin. Claws four in front and behind, sharp, and of moderate size.

Tail extremely short.

Shell horn-coloured above, yellowish below; head, neck, and legs of a sandy colour; a white band proceeds from the angle of the mouth towards and along the lower side of the neck; it is edged with brown above and below, and seems to cross the eye and the forehead. Throat mottled with brown.

	inch.	lin.
Length of carapace	3	..
Greatest width of carapace	2	6
Length of sternum	2	4
Greatest width of sternum	1	7
Length of head and neck	1	11
Length of head	..	11
Width of head	..	7
Length of eye	..	1 $\frac{3}{4}$

The specimen was discovered by Lieut. Gairdner in fresh water south of the Rio de la Plata. It is evidently very young, the umbilical cicatrix being still visible. Like the Matamata this species seems to be of sluggish habits, as fungoid growth has made its appearance on the upper shell as well as on the sternum; also in other respects the habits of both are probably identical.

LIV.—*Note on some East-African Antelopes supposed to be new.* By Dr. A. GÜNTHER, F.R.S.

COL. THE HON. WENMAN C. W. COKE kindly placed in my hands some years ago the skull of a Hartebeest (*Alcelaphus*) which he had killed on the east coast of Africa, on his way to the Mpwapwa Mountains. The horns differed so remarkably from those of the other species of this genus, that I considered it then to be the type of a probably new species; and

this supposition has been confirmed by Mr. J. Thomson bringing a frontlet of the same type from his late expedition to Mount Kenia and Victoria Nyanza. The animal killed by Col. Coke was probably a female; he preserved with the skull the skin of the head, which shows that the upper parts were of a reddish-brown colour, gradually passing into a light greyish brown below. For this species I propose the name of *Alcelaphus Coki*.



Alcelaphus Coki.

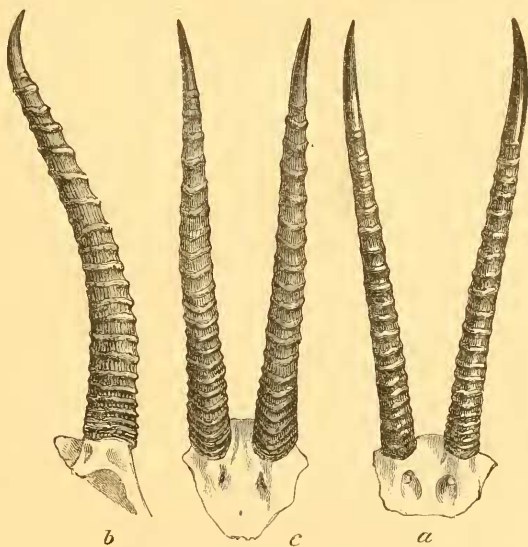
The horns diverge from their root so much as to form a right angle with the longitudinal axis of the skull, their basal portion being almost in the same plane with the forehead; their distal half forms again a right angle with the proximal half, the points being directed straight backwards. The front part of the horns is strongly ribbed longitudinally between the annulations, which are rather close near the base, and more widely placed and prominent at the bend of the horn with which the animal butts. The annulations are more or less effaced on the posterior surface of the horns and disappear altogether above the upper bend.

Mr. Thomson's specimen was an adult buck, in which the horns are somewhat stouter and their bend is more decidedly directed forwards.

Measurements.

	Col. Coke's spec. inches.	Mr. Thomson's spec. inches.
Length of the skull	17	..
Entire length of horn, measured round the curvature	16	16 $\frac{1}{2}$
Length of horizontal branch of horn	7	7 $\frac{1}{2}$
Length of distal half of horn	7 $\frac{1}{2}$	8 $\frac{1}{2}$
Greatest circumference of horn	8	9 $\frac{1}{2}$

Mr. Thomson has also brought from the same expedition two frontlets (male and female) of a gazelle, similar to *Gazella Grantii*, which, however, after full consideration and comparison with the specimens in the Natural History Museum, I must consider specifically distinct. Both specimens come from animals which are not only fully adult, but, to judge from the sutures of the preserved part of the skull, of somewhat advanced age. The horns start much in the same direction as in *Gazella Grantii*, showing, however, scarcely any divergence in the male, and but a slight one in the female; also their curvature is much less than in *Gazella Grantii*. The



Gazella Thomsonii: a ♀, b and c ♂.

annulations are strongly marked, not less so behind than in front of the horn, closely arranged and about twenty in number; only a short distal portion of the horn is smooth. The horns are compressed, without enlargement of the base of the bony core, and much less developed as regards thickness

and length than in *Gazella Grantii*, as will be seen from the following measurements :—

	♂. inches.	♀. inches.
Length of horn	13	13
Circumference of horn at the base	4½	3¼

The question naturally arises whether the horns described are those of younger individuals of *Gazella Grantii*; but this must be answered in the negative, as the cranial portion which has been preserved, of the male as well as of the female, shows that the animals were much older than our specimens of *Gazella Grantii*, which are armed with horns of that large size described and figured by Sir Victor Brooke. Moreover it is not conceivable that fully matured horns like those obtained by Mr. Thomson should be further developed into a shape or size like that of Grant's antelope. Finally Mr. Thomson informs me that the specimens were on the whole smaller than *Gazella Grantii*, a statement which is confirmed by the less width of the interorbital portion of the cranium. It is also worthy of notice that the deep notch in the orbital margin of the frontal bone, which is commonly observed in the skull of gazelles and also in *Gazella Grantii*, is scarcely indicated in the present species, for which I propose the name of *Gazella Thomsonii*.

Peters figured in the 'Monatsberichte' of the Berlin Academy for 1879, p. 832, the skull of a male antelope not fully adult, which he considered to be *Gazella Grantii*, but which clearly belongs to a distinct species. It resembles somewhat *Gazella Thomsonii* in the slight degree in which the horns diverge from each other; but their annulated portion is almost straight, and the annuli themselves are much further apart, much fewer in number (about twelve), and lower towards the hinder part of the horn. The base of the bony core shows a bossy swelling, which is different from that of *Gazella Grantii*, and entirely absent in *Gazella Thomsonii*. This species may be called *Gazella Petersii*.

Mr. Thomson has kindly supplied me with some further particulars. His antelope is marked with a distinct, black lateral band, the absence of which is characteristic of *G. Grantii*. He found it in small herds, in country in which the latter was abundant, the herds of the two species never mingling with each other. He observed it over the range of country from Kilimanjaro to Baringo and at various heights under 6000 feet. According to our present knowledge, *Gazella Grantii* would seem to occur further north and south than

the two other forms, it having been obtained by Capts. Speke and Grant and Mr. Arkwright in the Ugogo district, and by Sir J. Kirk in South Somali Land. The skull of *Gazella Petersii* was obtained at the mouth of the Dana river in northern Zanzibar, the collector stating that the species is very common in the Gallas Land.

LV.—*Description of a new Species of the Carabideous Genus Callistomimus.* By CHARLES O. WATERHOUSE.

Callistomimus Dicksoni, n. sp.

Head bluish green, smooth in the middle, strongly punctured at the sides. Antennæ nearly black, the first, second, and base of the third joints pitchy. Thorax yellowish red, strongly and rather closely punctured, the median line deeply impressed. Elytra dark olive-green, almost black, the base and margins paler olive-green; the suture with a yellowish-red stripe reaching to the apex. Each elytron with two transverse pale yellow spots—the first near the base, reaching from the sutural stripe to near the margin; the second about one quarter from the apex, slightly arched, not quite touching the lateral margin. Legs pale testaceous; the knees, the apex of the tibiæ, and the apex of the tarsi blackish. Body beneath black.

Length $5\frac{3}{4}$ millim.

Hab. Formosa (*M. Dickson, Esq.*).

This species is relatively longer and narrower than *C. modestus*, Schaum, and quite differently coloured. The thorax is very similar in form, but is a little less constricted at the base; the disk is more convex and the medial line more impressed. The elytra resemble those of *Callistus lunatus* in general form, but are narrower.

LVI.—*Description of a new Species of Julodis (Coleoptera, Buprestidæ).* By CHARLES O. WATERHOUSE.

Julodis Finchi, n. sp.

Castanea, pube sordide alba induta; thorace medio impresso, lineis guttisque numerosis nitidis ornato; elytris tomentosis, lineis quatuor interruptis parum elevatis rugisque numerosis nitidis calvis. Long. 31 lin. (67 millim.).

Uniform brown, with all the surface (except where there are